

117327

Please Code As: United Technologies Corporation

400 Main Street M/S 182-85
East Hartford, CT 06108
(860) 565-4613 FAX: (860) 565-4555



Pratt & Whitney

A United Technologies Company

DEPT. OF TRANSPORTATION

NOV 11 19

November 29, 2000

Docket Management System
U.S. Department of Transportation
Room Plaza Level 401
400 Seventh Street, SW
Washington, DC 20590-0001

Subject: FAA-2000-8017 ~ | |
NPRM: Safe Disposition of Life-Limited Aircraft Parts

Greetings:

Thank you for the opportunity to review and respond to the subject Notice of Proposed Rule Making (NPRM), published in the *Federal Register* (Docket No. FAA-2000-8017) on October 2, 2000. United Technologies Corporation is pleased to respond on behalf of its Pratt & Whitney Division, Hamilton-Sundstrand Corporation and Sikorsky Aircraft Corporation.

Based on our review of the NPRM, we believe that the proposed regulations: (i) are ambiguous; (ii) could result in a life-limited part being damaged or erroneously disposed of before its life-limit expires; (iii) would impose requirements on repair stations that are beyond the scope of 49 U.S.C. §44725 ("Section 44725"), which was intended to require the safe disposition of these parts when they reached or exceeded their life limits; and (iv) will result in increased expenses for repair stations that are much higher than the FAA's estimate set forth in the NPRM.

Our specific comments are described below:

Ambiguity of the Proposed Rule:

A literal reading of the proposed regulations falls short of the clarity of the preamble and may potentially result in different interpretations in daily usage.

For example, who has the responsibility for ensuring that the requirements are met is uncertain. The proposed regulations (Sections 43.1(c) and 43.10(b)) provide that each person removing the part is responsible for ensuring that the part is controlled in accordance with the proposed regulations. Per 14 CFR Part 1.1, a "person" includes an individual, firm, partnership, corporation, company, etc. So, per the proposed regulation, the individual first removing the part would be responsible. However, the preamble states:

The person who removes the part need not be the same person who implements the requirements of paragraphs (b)(1) through (6). For example, an air carrier mechanic removing a part might not personally control the part in accordance

with one of the methods described in paragraph (b) (1) through (6) of this section, but may give the part to the air carrier's material control department to disposition in accordance with its procedures manual.

Thus, the plain language of the proposed regulation yields a potentially different result than a reading of the preamble. The preamble properly recognizes that the person making the disposition as to the status of the life-limited part should be responsible for complying with the proposed regulations as opposed to the mechanic who removes a part from a type-certified product. Accordingly, we believe that the proposed regulation, not just the preamble, should be clarified to ensure that responsibility for complying with proposed regulations lies with the appropriate entity.

The NPRM also is ambiguous with respect to when a life-limited part should be permanently marked. Section 43.10(b) sets forth six methods for controlling life-limited parts, including permanent marking. However, the regulations do not provide any guidance as to when permanent marking should be utilized. The preamble recognizes, however, that permanent marking should be used primarily when parts are permanently removed from service. Thus, the preamble provides additional guidance that would be useful on a routine basis as to when permanent marking may be more suitable than the other options of the proposed regulations. The guidance seems to indicate that permanent marking is "used mostly for parts that are permanently removed from service"; however, the proposed regulation requires "updating the status each time the part is removed from service". Accordingly, is this option for just "final" removal from service as the preamble implies or is it a normal option for parts continuing in service? The last sentence of the 43.10(b)(2) seems to make it clear that this is a "usual option" not primarily a "final" option. We believe that the proposed regulations should be clarified to incorporate the intent of the preamble that permanent marking should be used when parts are permanently removed from service.

During the daily and routine course of business at the repair stations and other certificated entities, the literal regulations are what are normally relied upon. The preambles are typically consulted only after issues arise. When finished, the preamble must be made to conform to the regulation or the proposed regulations must be modified to accurately reflect the preamble. Increased clarity in the proposed regulatory language is needed. A difference between the preamble and the literal reading of the regulation leads to uncertainty and uncertainty is not a desirable result of the regulatory process.

Possible Damage to Life-limited Parts:

Life-limited parts are subject to changes in the life limit. This is particularly true of new configurations where the life limit is often increased as field experience is factored into the life limits. Permanent marking of a part with a "mandatory replacement time" may cause a part to be inadvertently rendered unserviceable when it is still airworthy. Further, the space to mark Life-limited parts is usually limited and marking outside of the restricted area could also result in a part becoming non-compliant with approved technical data.

Comments on Specific Sections:

Section 43.1

Section 43.1(c) is unnecessary, as proper management of Life-limited parts is inherent in properly performing maintenance, preventative maintenance, rebuilding and alteration as required by 14 CFR Part 43.

If Section 43.1(c) is not removed, it should be limited to only the person making the disposition, including segregation, of the part. As written, the section can be read as requiring an individual who merely removes a Life-limited part as a function of teardown or who places it on an inspection rack as being required to perform to the other requirements of the proposed regulations. This is not what the preamble states. The correct juncture to make a reasoned decision as to the part status is when the part is dispositioned, not when it is merely removed. The disassembly mechanic seldom would have the part records and other information necessary to determine part status. Placing a Life-limited part on an inspection rack is a segregation of the part and that could be also interpreted as making the mechanic liable for the regulatory compliance to the proposed regulations.

Section 43.10

Section 43.10(a) contains definitions. It would be appropriate to place these in 14 CFR 1.1 that should contain all definitions used in the regulations. Further, the definition of Life-limited part should be changed to read:

"Life-limited part" would be defined to mean any part for which a mandatory replacement ~~time limit~~ is specified in the Airworthiness Limitations section of a type certificate holder's maintenance manual or Instructions for Continued Airworthiness.

As limitations may be time, cycles or other criteria, the regulation should speak to limit rather than time that is only one possible limit.

As a significant concern to United Technologies Corporation, Section 43.10(b) of the proposed regulations requires Life-limited parts to be managed (i.e., segregated and/or marked) prior to the parts being permanently removed from service. This requirement exceeds the legislative mandate of Section 44725, which only addresses the safe disposition of Life-limited parts that have reached or exceeded their life-limits. Requiring Life-limited parts to be managed prior to the parts being permanently removed from service places a burden on repair stations not contemplated under Section 44725.

Notwithstanding the above comment and assuming that the section will not be changed to address only the final disposition at the life limits, the following comments address the proposed regulations as currently written. The introductory portion of 43.10(b) should be changed to read:

(b) After [the effective date of the final rule], each person who ~~removes~~ **dispositions** a life-limited part from a type-certificated product must ensure that

the part is controlled using one of the methods in paragraphs (b)(1) through (6) of this section. **Disposition shall be made in a reasonable business time. It shall be permissible for any person in a manner acceptable to the Administrator to return Life-limited parts to the owner, operator, or entity that supplied the parts for the purpose of segregation, permanent marking or destruction and then that person which supplied said parts shall be responsible for the safe disposition of the parts.** The method must prevent the part from being installed after it has reached its life limit. Approved methods include:

As stated above, the person making dispositions of the part should be responsible to assure compliance, not, for example, the teardown mechanic who may not have access to the required data. Further, the section as written could make a teardown mechanic legally responsible for the safe disposition of the part if the mechanic were to merely remove an “expired” the part from the engine. The proposed regulation can be interpreted to require immediate action and, as a practical matter, disposition will require records and other information which may not be immediately available; thus, the suggestion to include a “reasonable business time”.

Further, as currently written, under Section 43.10(b), a repair station would become responsible for managing Life-limited parts. This requirement ignores the fact that repair stations do not own the parts they remove and typically do not have the right to hold or destroy such parts. Requiring repair stations to segregate, hold and maintain records for parts would inappropriately place a burden, both logistic and financial, on repair stations, as opposed to the operators or entities that actually own the Life-limited parts. Accordingly, the proposed regulation should be modified to specifically allow a repair station to return life-limited parts to the part owner for marking, segregation or safe disposition of the part.

Sections 43.10(b)(2) and (4) allow the use of part marking. As noted above, the preamble seems to indicate that (b)(2) is for use more as a final determination while the literal reading of Subsection (b) seems to indicate that all six (6) options are equally acceptable methods of managing Life-limited parts. This apparent discrepancy between the preamble and the proposed regulations needs to be clarified. Although subsection (2) requires permanent marking to determine status, subsection (4) does not require permanent marking which implies that temporary marking is acceptable. If so, then how can the temporary markings be “updated each time the part is removed” as required by subsection (4)? The temporary marking would probably be removed as a result of operations. Also, permanent markings of status on the parts will lead to multiple entries, some of which may become obliterated and thereby conflict with other records. If the markings are temporary, and some survive, this opens up conflict with other records. Long-lived parts will have multiple entries on the part and may cause confusion as to what the status really is and may consume all available marking space making further marking impossible. If further marking becomes impossible, the part may become suspect. More clarity and differentiation between subsections (2) and (4) are needed.

Section 43.10(b)(6) should be changed to: “Any other method ~~approved by~~ **acceptable** to the Administrator.”

Recognizing the different type of parts and situations, “method acceptable” offers greater flexibility to satisfy the intent of the regulation.

Cost Estimate:

We believe that the Paperwork Reduction Act cost estimate is substantially understated. The FAA estimated that the 1,500 shops, of the estimated 5,000 shops, most affected would perform 300 procedures. The remaining 3,500 shops would perform 50 procedures. Life-limited parts removed from a jet engine, such as disks, hubs and shafts, would require, under the proposed regulations, a procedure, such as marking or tagging. We believe that a large size engine repair station, such as those owned by Pratt & Whitney, would perform approximately 3,000 actions a year. This is dependent upon the size of the repair station, number of engines produced, the engine configuration, the mix between full and partial engine maintenance occurrences; however, the number is significantly different from the FAA projection. Factoring in activities at Pratt & Whitney repair stations that work on Life-limited parts and assuming that additional controls would be required at those shops, we would estimate an annual impact of \$43,000, using the FAA's suggested time and rate factors. Prorate that amount against all the Pratt & Whitney repair stations, many of which will be minimally impacted by the proposed regulations, it yields about \$1,900 per shop, which we feel is a fair representation of the industry cross-section. If this amount is used for the FAA estimated 5,000 shops, the annual industry impact would approximately \$9.4Million industry impact, not the estimated \$2.6Million. This is a significant difference and a larger financial burden on industry than recognized by the FAA.

Respectfully submitted for United Technologies Corporation,


Thomas M. Gonzalez
Director, Regulatory Compliance
Pratt & Whitney Division